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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/049,665 | 04/11/2002 | Sybille Frank | 0475-0204P | 4705 |
| 2292 | 7590 | 12/09/2004 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | LOPEZ, CARLOS N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1731 | |

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/049,665 | FRANK ET AL. | |
| | Examiner | Art Unit | |
| | Carlos Lopez | 1731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/27/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2 IDS's</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

The amendment filed on 9/27/04 has been entered.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/28/04 has been considered except for the Allemann et al, having illegible page 956, and Tosoh Zirconia Powder having an unknown date of publication.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 1) Claims 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 recites a pre-sintered blank with a specified composition. Claim 34 does not provide any connection to the active steps recited in parent claim 17. Is the claimed blank recited in claim 17, further defined by claim 34? Additionally, the use of the phrase "the blank" recited in claim 34 at the fourth to last line, creates ambiguity as to which blank is being referred to. Is the blank having the specified composition being referred to in claim 34 or is it the blank specified in parent claim 17?

For examination purposes, claim 34 is further defining the blank recited in parent claim 17 and the phrase "the blank" recited in claim 34 refers to the blank having the specified composition.

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It is also noted that claims 22, and 29-30 are being treated as a product-by-process claim. As noted in MPEP 2113:

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) Claims 22-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsunekawa et al (US 4,820,667).

Tsunekawa discloses a high strength zirconia ceramic. Example 2 of Tsunekawa

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discloses a pre-sintered preform blank having the claimed zirconium, no hafnium, yttrium, no coloring additives and aluminum oxide. In view that table 6, i.e. see sample 67 of Tsunekawa, discloses the composition of the sintered preform blank having the claimed oxide quantities, it is inherent that the pre-sintered preform would also have the claimed oxide quantities since the pre-sintered preform has only been heated to form the sintered preform. Tsunekawa does not disclose the claimed raw breaking resistance. However, in view that Tsunekawa provides for a pre-sintered blank comprising the same composition as claimed it is reasoned that it would be inherent that Tsunekawa's pre-sintered preform blank would have the claimed raw breaking resistance or at the very least be obvious to a person of ordinary skill in the art that the claimed raw breaking resistance would be expected in Tsunekawa's pre-sintered preform.

As for claim 29-30, the claimed sintering of the blank one at a temperature of 850°C to 1000°C would not provide a blank that is structurally distinct from that of Tsunekawa.

As for claims 31-33, in view that Tsunekawa provides for a pre-sintered blank comprising the same composition as claimed it is reasoned that it would be inherent that Tsunekawa's pre-sintered preform blank would have the claimed deviation or at the very least be obvious to a person of ordinary skill in the art that the claimed deviation would be expected in Tsunekawa's pre-sintered preform.

As for claim 22, the pre-sintered blank of Tsunekawa is considered a denture part.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3) Claims 23-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6-7 of U.S. Patent No. 6,713,421. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite a blank or denture comprising zirconium oxide based ceramic and its method of forming and method of forming a blank having the same composition as instant claims 23-33. Claims 1-4 and 6-7 fail to disclose the claimed breaking resistance and/or deviation from linearity recited in instant claims 23-33. However, in view that the denture or pre-sintered blanks recited in claims 1-4 and 6-7 of U.S. Patent No. 6,713,421 have the exact same composition as claims 23-33, it would be obvious to a person of ordinary skill in that at the time the invention was made that the claimed breaking resistance and deviation from linearity properties would be found in the denture and pre-sintered blanks of U.S. Patent No. 6,713,421.

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4) Claims 17-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5 and 6 of copending Application No. 10/468,071. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed method of making a denture by preparing a blank, fine and rough processing the blank, and dense sintering a blank of zirconium oxide is recited in claim 5 of the noted copending application. Claim 5 of the copending application notes that the pre-sintered blank has a green strength, deemed as the claimed raw breaking resistance, of 31 MPa but is silent disclosing the instantly claimed raw breaking resistance of 28 MPa. In view that the method of the copending application recites the same steps in preparing the same type of zirconium oxide ceramic blank as instantly claimed, it would be obvious to a person of ordinary skill in the art, at the time the invention was made, that the pre-sintered blank of the copending application would also have a raw breaking resistance range that includes 28 MPa.

As for claim 20, claim 5 dependent on claim 4 of the copending application recites the claimed processing of the blank from a side that contacts a tooth stump.

As for claim 22, claim 6 of the copending application recites forming a denture part from the copending application's method claim 5.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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5) Claims 23-33 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-12 of copending Application No. 10/468,071. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 10 of the copending application recites the same composition of instant claims 23-28. Claim 10 of the instant application is silent disclosing the claimed raw breaking resistance of 30MPa or 28 MPa but does not that it has a green strength, deemed as the claimed raw breaking resistance, of 31 MPa. In view that the pre-sintered blank of the copending application has the same composition of the instantly claimed pre-sintered blank, it would be obvious to a person of ordinary skill in the art that the pre-sintered blank of the copending application would have the claimed raw breaking resistance as instantly claimed.

As for claims 29-30, claim 11 of the copending application recites sintering at the claimed temperature range.

As for claims 31-33, the claimed deviation from linearity is disclosed in claim 12 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection. Applicant notes in page 15 of the remarks section that Tsunekawa fails to disclose the claimed raw breaking strength.

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However, as noted above, that if a ceramic blank has the same composition as claimed, one of ordinary skill in the art would reason that it also has the claimed raw breaking strength. Applicant has not provided any evidence on record to rebut the established prima facie case.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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